

# EERE Laboratory Priorities

Presentation to the Commission to Review the Effectiveness of the National Energy Laboratories



U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy

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# EERE's Strategy Stems from the DOE Strategic Plan

## DOE Mission:

Enhance U.S. security and economic growth through transformative science, technology innovation, and market solutions to meet our energy and environmental challenges

**GOAL 1: EERE Vision:** A strong and prosperous America powered by clean, affordable and secure energy

**GOAL 2: EERE Mission:** To create and sustain American leadership in the global transition to a clean energy economy

**GOAL 3: EERE Principles:** Prosperity, Affordability, Environmental Responsibility, Security, Choice

## Goal 1: Science and Energy

Goal 1: Accelerate the Development and Use of Sustainable Transportation Technologies

Goal 2: Increase the Generation of Electric Power from Renewable Resources

Goal 3: Improve the Energy Efficiency of Our Homes, Buildings, and Industries

Goal 4: Stimulate the Growth of a Thriving Domestic Clean Energy Manufacturing Industry

Goal 5: Enable the Integration of Clean Electricity into a Reliable, Resilient, and Efficient Grid

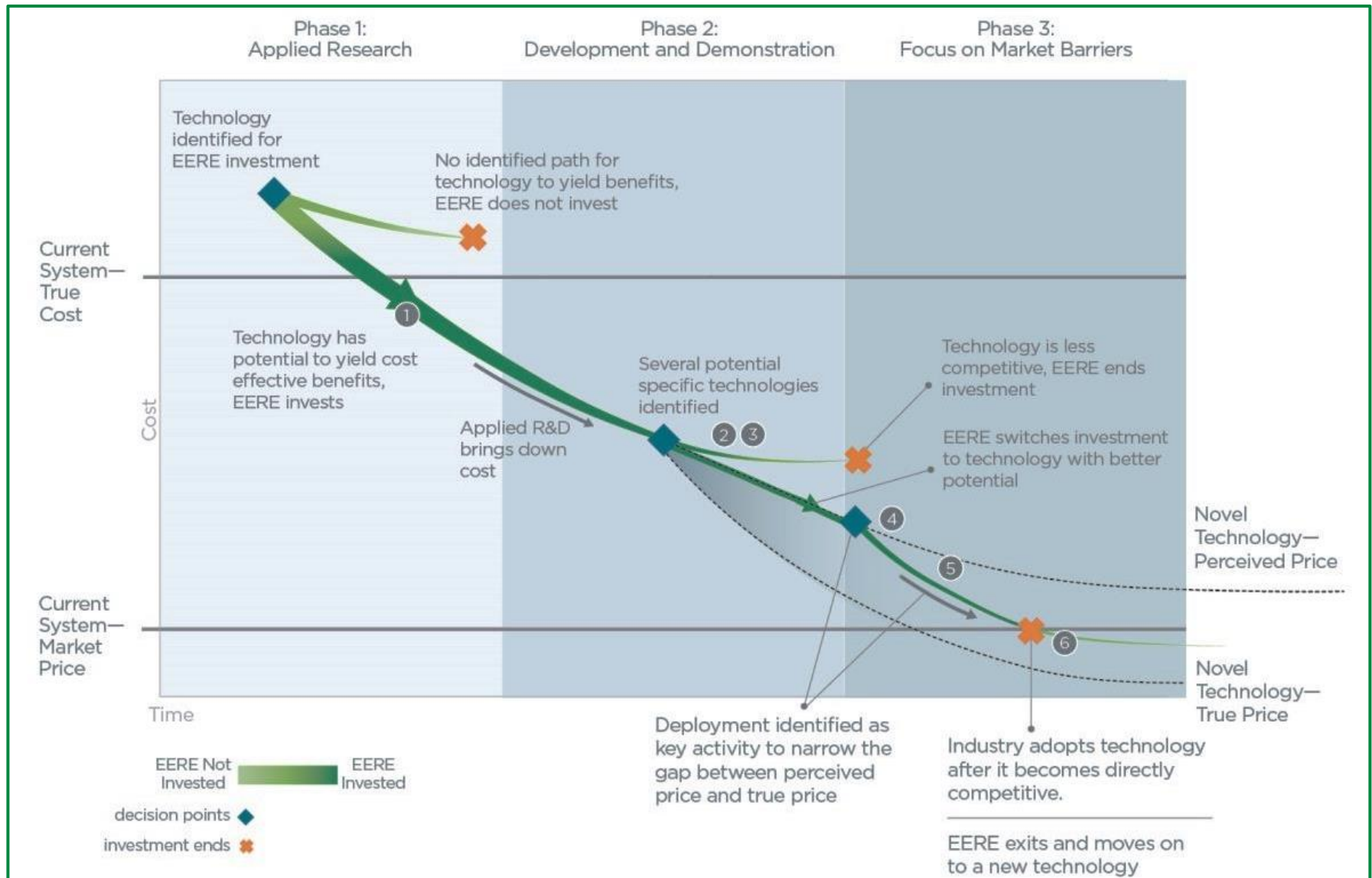
## Goal 2: Nuclear Security

## Goal 3: Management and Performance

Goal 6: Lead Efforts to Improve Federal Sustainability and Implementation of Clean Energy Solutions

**Goal 7: Enable a High-Performing, Results-Driven Culture through Effective Management Approaches and Processes**

# The EERE Investment Pathway





# How EERE Works with the National Laboratories

EERE invests one-third (\$600M) of its annual budget at 12 National Labs.

- Engage labs as our **strategic partners**, e.g., DOE Lab Big Ideas Summit identified several national big challenges that can be addressed through integrating lab capabilities
- **Stewardship** responsibilities for NREL with emphasis shifted on outcome-based versus activity or task-based performance evaluation criteria
  - US Science and Energy commissioned performance management improvement team led by EERE and SC and includes NNSA
- **EERE-National Laboratory Guiding Principles**, with three core principles
  1. Long-Term Commitment and Stewardship
  2. Mutual Respect and Accountability
  3. Industry and Market Impact
- Utilize a uniform planning tool and process for developing lab AOPs
- Emphasizing commitment to **larger, multi-lab, multi-year projects**
- Merit review prior to funding and peer review portfolio biennially
- Tech-to-Market planning and activities integrated as a core element of laboratory-funded work

# Technology Transitions and Industry Partnership

- Comprehensive Lab Impact Communications Strategy
- In 2014, DOE National Laboratories won **31 R&D 100 Awards** (labs have won 15% of all R&D 100 Awards ever granted)
- National Lab Impact Initiative Pilots
  - Lab-Corps
  - Technologist-in-Residence
  - Small Business Vouchers

*"Having NREL as a partner has provided value to GE Wind in many ways, from performing analysis that impacts today's offerings, to developing test capabilities for tomorrow's hardware and software, to guiding the direction of future high impact research for the entire wind industry."*

- Thomas J Fischetti, Senior Engineering Manager, Wind Technologies, GE Power and Water Renewable Energy

# Aligning DOE Priorities: Organizing Labs around Grand Challenges and Integrating Capabilities Across the Complex

## Example: Grid Modernization

- **Strengthening national capabilities** - Built Energy Systems Integration Facility to address grid integration issues associated with high penetration of variable renewables and other advanced clean energy technologies
  - NREL has signed **15 partnership agreements** (with more pending) since Secretary commissioned last September
  - DOE issued solicitations to industry/solicitations around integration challenges
  - ESIF awarded **2014 Laboratory of the Year** Award by R&D Magazine
- **DOE and Labs organizing around Grid Modernization Challenge**
  - DOE offices jointly developing multi-year plan and establishing high level outcomes
  - Labs self-organize and identify and leverage core and enabling capabilities.
  - Multi-lab grid consortium is potential model for addressing other grand challenges

